

REMARKS

The present application includes pending claims 1-20, all of which have been rejected. By this Amendment, claims 1, and 9 have been amended, while claims 4 and 11 have been cancelled without prejudice or disclaimer to the subject matter therein. It is respectfully submitted that the pending claims define allowable subject matter.

Claims 1-4, 8, 9, and 14-16 have been rejected under 35 U.S.C. 102(e) as being anticipated by United States Patent No. 6,441,614 (“Edelstein”). Claims 5-7, 9-12, and 17-19 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Edelstein in view of United States Patent No. 4,594,781 (“Hirata”). Claim 20 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Edelstein in view of WO 01/25808 (“Feenan”). The Applicants respectfully traverse these rejections at least for the reasons discussed below and previously during prosecution.

I. Edelstein Does Not Anticipate The Claims Of The Present Application

The Applicants first turn to the rejection of claims 1-4, 8, 9, and 14-16 as being anticipated by Edelstein. Edelstein relates to a gradient coil assembly with an “annular space” between inner and outer gradient coil windings “filled with a filler material and, more particularly, to a concrete filler material comprising cement and a selected aggregate material.” Edelstein at column 1, lines 6-13.

Edelstein disclose a system in which a “concrete material, preferably a conglomerate of Portland cement and one or more selected aggregates, affords more effective suppression of vibration and noise.” *Id.* at column 3, lines 9-13. “Alternatively, a concrete cylinder with a hollow annulus, i.e., a cylindrical concrete sleeve” may be used. *Id.* at column 3, lines 18-25.

A. Edelstein Does Not Teach, Nor Suggest, Viscoelastic Layers Of Foam And/Or Rubber

Edelstein, however, does teach, nor suggest, a “damping layer comprising at least one viscoelastic layer composed of at least one of foam and rubber,” as recited in claim 1, as amended. While Edelstein discloses concrete layers, and even layers of material that are a mixture of concrete and other materials, Edelstein does not teach separate layers composed of foam and/rubber.

Edelstein discloses a layer of concrete. *See id.* at column 4, lines 62-64 (“As shown in FIG. 3, concrete 26 is then poured into cylindrical space 13 from a nozzle 28, filling the space completely.”). Edelstein also discloses a hollow concrete cylinder. *See id.* at column 5, lines 42-45 (“A concrete cylinder 36, of a hollow cylindrical, or annular, construction and of appropriate inner and outer diameters, is disposed coaxially into cylindrical space 13...”).

Additionally, Edelstein discloses that various materials may be added to the concrete, thereby forming a single concrete filler having additional materials mixed throughout.

The concrete filler can be made in many sizes and forms, and also of many different compositions, to optimize its properties as a filler for the present purposes. Generally, concrete (i.e., “conventional” or “standard” concrete) consists of portland cement and an aggregate. The aggregate may comprise a selected one, or combination, of materials having lower density than portland cement, such as expanded shale, fly ash and pumice that reduce the weight, but have minimal adverse impact on the strength and stiffness of the concrete, compared to normal (i.e., higher density) concrete. Also, foam **can be introduced into** the concrete to make it lighter in weight. Fibers, such as glass, fiberglass, carbon fiber

and plastic fibers, **can be included** to increase tensile strength, which is important since concrete cylinders 36 employed in the second and third embodiments of the invention have relatively thin annular walls compared, for example, to the annular wall thickness of poured concrete cylinder 26 in the first embodiment of FIGS. 1-4.... One preferred embodiment, with beneficial results was obtained **using a concrete made of cement with pumice aggregate and a water-latex solution.**

Id. at column 7, lines 28-52 (emphasis added). As clearly shown above, Edelstein discloses a concrete layer that may be formed as a mixture of concrete and other materials, such as foam or a water-latex solution. As such, Edelstein discloses a layer that includes concrete and other materials throughout. Edelstein, however, does not teach, nor suggest, separate foam or rubber layers. That is, Edelstein does not teach, nor suggest, a “damping layer comprising at least one **viscoelastic layer composed of at least one of foam and rubber.**” Thus, at least for this reason, the Applicants respectfully submit that Edelstein does not anticipate claims 1, 9, or the claims that depend therefrom.

B. Edelstein Does Not Teach, Nor Suggest, A High Modulus Cylinder Sandwiched Between Viscoelastic Layers

With respect to claims 2, 10, and 14, Edelstein also does not teach, nor suggest, a damping layer that includes “at least one high modulus cylinder sandwiched between two viscoelastic layers.” Once again, Edelstein does not teach separate layers of damping material. Instead, Edelstein discloses a layer of concrete that may include other materials dispersed throughout. The Office Action cites the hollow concrete cylinder to reject claim 2. However, such a hollow cylinder having air or a vacuum within, is not a high modulus cylinder. The

hollow interior, by definition, is empty, and therefore, is not a cylinder. Further, the hollow space between the concrete walls is not a high modulus material, such as ceramic, glass filament wound tube, carbon fiber. As noted above, Edelstein discloses that glass, fiberglass, carbon fiber and plastic fibers, **can be included** within the concrete mixture. However, Edelstein does not disclose separate layers of these materials. In general, Edelstein does not teach, nor suggest, a damping layer that includes “at least one high modulus cylinder sandwiched between two viscoelastic layers.” Thus, at least for these reasons, the Applicants respectfully submit that Edelstein does not anticipate claims 2, 10, and 14-16.

II. Edelstein And Hirata Or Feenan Does Not Render The Claims Of The Present Application Unpatentable

The Applicants now turn to the rejection of claims 5-7, 9-12, and 17-19 as being unpatentable over Edelstein in view of Hirata. The Applicants respectfully submit that Edelstein and Hirata, alone or in combination with one another, do not render claims 5-7, 9-12, and 17-19 unpatentable, at least for the reasons discussed above and previously during prosecution.

The Applicants next turn to the rejection of claim 20 as being unpatentable over Edelstein in view of Feenan. The Applicants respectfully submit that Edelstein and Feenan, alone or in combination with one another, do not render claim 20 unpatentable, at least for the reasons discussed above and previously during prosecution.

III. Conclusion

The Applicants respectfully submit that the claims of the present application should be in condition for allowance at least for the reasons discussed above. The Applicants request reconsideration of the application and look forward to working with the Examiner to resolve any

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remaining issues in the application. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited to contact the Applicants. The Commissioner is authorized to charge any necessary fees or credit any overpayment to Applicants' Deposit Account 07-0845.

Respectfully submitted,

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By: _____

Joseph M. Butscher
Reg. No. 48,326
Attorney for Applicants

McANDREWS, HELD & MALLOY, LTD.
500 West Madison Street, 34th Floor
Chicago, Illinois 60661
Telephone: (312) 775-8000
Facsimile: (312) 775 - 8100